AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-20. (Canceled)

21. (Currently amended) ~~A system for forming an~~ An inverse resist ~~coating~~ coated ~~on a~~ semiconductor substrate, comprising:

~~a chamber for patterning~~ a patterned first coating that is formed on a substrate surface, the patterned first coating comprising a resist material;

~~a first dispenser that deposits~~ a patterned second coating formed over the patterned first coating and exposed portions of the substrate surface[[;]],

~~a planarization component that removes~~ whereby the patterned second coating is formed by removing uppermost portions of the second coating to make the second coating level with the patterned first coating, whereby the patterned second coating ~~being~~ is an inverse pattern of the patterned first coating[[;]], and

~~a second dispenser that deposits a developer over the first and second coatings that removes~~ whereby the patterned first coating is removed while leaving the patterned second coating ~~to form a pattern~~ on the substrate ~~that is approximately an inverse pattern of the patterned first coating;~~

~~a measuring system for measuring at least one operating parameter within the chamber, wherein the operating parameter is required for patterning the first coating, depositing the second coating, or depositing the developer for removing the patterned first coating; and~~

~~a processor operatively coupled to the measuring system and at least one of the first dispenser and the second dispenser, the processor receiving operating parameter data from the measuring system and using the data to control at least one of the first dispenser and the second dispenser to form the inverse resist coating~~.

22. (Currently amended) The ~~system~~ substrate of claim 21, wherein at least one operating parameter is measured regarding the patterned first coating and the second coating, the operating parameter is measured by a measuring system ~~comprises~~ comprising one of a scatterometry system, an ellipsometry system, an UV/vis spectrophotometry system, and an x-ray reflectometry system.

23. (Currently amended) The ~~system~~ substrate of claim [[21]] 22, the operator parameter measured by the measuring system is communicated to a processor that uses the data to control at least one of the patterned first coating and the second coating, wherein the processor comprises a memory.

24. (Currently amended) The ~~system~~ substrate of claim [[21]] 23, wherein the planarization component is a CMP apparatus, wherein the measuring system is operable for measuring CMP characteristics, the processor operatively coupled to the CMP apparatus, and the processor using data to control the CMP apparatus.

25. (Currently amended) The ~~system~~ substrate of claim [[21]] 22, wherein operating parameter is at least one of etch rate, thickness, surface pattern, deposition rate, and development rate.

26. (Currently amended) The ~~system~~ substrate of claim 21 ~~further comprising a third dispenser for providing a trim etchant to trim etch the pattern of the second coating, the measuring system is operable for measuring the trim etch, the processor operatively coupled to the third dispenser, and the processor using data to control the trim etchant~~ wherein the patterned second coating is trim etched by a trim etchant.

27. (Currently amended) A method of processing a substrate ~~using the system of~~ as described in claim 21, comprising:

forming a first coating comprising a resist material on a substrate surface;

irradiating and developing the first coating to form a patterned first coating on the substrate surface;

forming a second coating over the substrate surface;

removing the patterned first coating while leaving the second coating to form a pattern on the substrate that is approximately inverse of the pattern formed by the first coating prior to its removal; and

using the patterned second coating as a protective layer while subjecting the substrate to further processing.

28. (Previously presented) The method of claim 27 further comprising the step of removing the patterned second coating.

29. (Previously presented) The method of claim 27, wherein the further processing comprises etching the substrate using the patterned second coating as a mask.

30. (Previously presented) The method of claim 27, wherein the further processing comprises forming a third coating on the substrate surface.

31. (Previously presented) The method of claim 30 further comprising the step of removing the patterned second coating while leaving the third coating in a pattern similar to that of the first coating.

32. (Previously presented) The method of claim 30 further processing comprises etching the substrate using the patterned third coating as a mask.

33. (Previously presented) The method of claim 32 wherein the third coating has a substantially greater dry etch resistance than the first coating.

34. (Previously presented) The method of claim 27 wherein the second coating has a substantially greater dry etch resistance than the first coating.

35. (Previously presented) The method of claim 27, wherein the second coating is composed primarily of organic material.

36. (Previously presented) The method of claim 27, wherein the second coating is formed by applying a liquid solution to the substrate followed by curing.

37. (Previously presented) The method of claim 27 wherein, the second coating is spin coated on the substrate.

38. (Previously presented) The method of claim 27, wherein the first coating comprises a positive tone photoresist.

39. (Previously presented) The method of claim 38, wherein the first coating comprises a novolac.

40. (Previously presented) The method of claim 27 wherein the patterned first coating is removed by irradiating with actinic radiation followed by developing.

41. (Previously presented) The method of claim 27 further comprising etching the patterned first coating to reduce feature sizes prior to forming the second coating.

42. (Previously presented) The method of claim 30 further comprising etching the patterned second coating to reduce feature sizes prior to forming the third coating.

43. (Previously presented) The method of claim 42, wherein after the patterned first coating is removed, the second coating material forms a pattern having gaps of less than about 0.5 μm.

44. (Previously presented) The method of claim 42, wherein, after the patterned first coating is removed, the second coating material forms a pattern having gaps of less than about 0.25 μm.

45. (Currently amended) A method of processing a semiconductor substrate ~~using the system of~~ as described in claim 21 comprising:

forming a patterned first coating;

forming a second coating with a pattern that is the negative of the first coating pattern; and

selectively etching the substrate surface where the second coating is absent.

46. (Currently amended) A method of forming sublithographic features in a substrate ~~using the system of~~ as described in claim 21, comprising:

forming a patterned first coating on a substrate by coating the substrate with a resist, exposing the resist, and developing the resist;

etching the first coating to form a modified pattern that has features that are sublithographic for the resist and method of exposure used to form the patterned first coating;

forming a second coating over at least that portion of the substrate surface not covered by the patterned first coating;

removing the patterned first coating while leaving the second coating to form a pattern that is approximately the negative of the pattern formed by the first coating after etching; and

etching the substrate using the second coating as a mask.